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New Health Hazard Evaluation Reports Now Available

Reports address concerns of exposure to welding fumes, mold and ergonomic stressors.

NIOSH Chief Scientist Begins Term as Interim CDC Associate Director for Science

Dr. James Stephens began new assignment in early July.

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- 8th Annual Technologies for Critical Incident Preparedness Conference and Exposition 2006, September 6 – 8, 2006, Atlanta, GA.

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From the Director's Desk

The summer of 2006 has been a season of extreme weather, from scorching record-setting temperatures in much of the U.S., to heavy rains and fierce thunderstorms resulting in dangerous flooding. Severe weather affects every aspect of our lives, including the time we spend at work. The impact is especially great for men and women whose jobs involve outdoor activity.

NIOSH provides several resources to help employers and workers address the seasonal aspects of summer on the job, and to keep summertime work safe and healthy:

- Every summer, heat is a concern for construction workers, landscape employees, and others whose jobs are performed outdoors. This year, in many areas, people who work indoors had no respite either. Fierce thunderstorms, fueled by the extreme heat, resulted in power outages from New York to California. Workers scrambling to restore power and air conditioning in high temperatures are at risk for heat-induced disorders, such as fatigue, heat exhaustion and heat stroke. NIOSH has assembled a resource of information on its heat stress topic page, <http://www.cdc.gov/niosh/topics/heatstress>, to remind workers not only of the potential for heat-related illness but also injuries caused by slippery palms, fogged safety glasses, and dizziness.
- Responding to floods and cleaning up flood damage afterwards pose many challenges and many potential safety and health concerns. NIOSH's wide-ranging recommendations for keeping these work activities safe, with particular attention to work activities in response to hurricanes and tropical storms, are available at <http://www.cdc.gov/niosh/topics/flood>.
- For outdoor workers such as farmers, groundskeepers, and construction workers, summer can bring the potential risk of exposure to the West Nile Virus through mosquito bites. Precautions should be taken to prevent contact with potentially infected mosquitoes. The NIOSH West Nile Virus topic page, <http://www.cdc.gov/niosh/topics/westnile>, provides safety recommendations for employers and workers.
- As families take to the water for relief from the heat, they may not be aware of a risk of exposure to carbon monoxide associated with generators and engines on houseboats and some other kinds of recreational vessels. Employees at marinas and other facilities who service and maintain such vessels may also be at risk. Working with the U.S. Coast Guard, the U.S. Park Service, and the marine manufacturing industry, NIOSH has developed extensive data and recommendations to prevent carbon monoxide poisonings and deaths. A new NIOSH topic page, *Carbon Monoxide Dangers in Boating*, provides a resource for employers in marine recreational fields, employees, and others. This page, <http://www.cdc.gov/niosh/topics/coboating>, includes NIOSH health hazard evaluation reports that document risk factors for exposure to carbon monoxide on and around houseboats; NIOSH engineering control



technology reports that describe evaluations of engineering controls; and a national case listing of carbon monoxide poisonings and deaths reported by states. For more information, contact Kevin Dunn at KDunn@cdc.gov or Alberto Garcia at AGarcia1@cdc.gov.

We at NIOSH hope that you will have a safe and enjoyable time in this final month of summer, and we encourage you to follow these safe practices while beating the heat.

Status Update from the NIOSH National Personal Protective Technology Laboratory

During the month of June, the NIOSH National Personal Protective Technology Laboratory (NPPTL) opened 41 requests for extensions of existing respirator approvals, and 15 applications for new approvals. In addition, NIOSH opened processes for reviewing quality assurance (QA) manuals for two respirator products; some manufacturers choose to submit their QA manuals for NIOSH review prior to submitting the actual products. Applications for testing and certification for 41 air-purifying and five air-supplied respirator applications were closed, as well as applications involving five quality assurance manuals. Thirty-six extensions of approval were closed, and 20 new approvals closed. Certification was granted for 46 products, and 13 applications were denied.

NIOSH also conducted post-certification activities, including 13 site audits and eight product audits. Product audits are conducted on previously certified respirators that NIOSH purchases and checks to ensure they are still in compliance with NIOSH certification standards. NIOSH also investigated four field problems that were reported and opened one certified product investigation.

Special Issue of Journal of Environmental Monitoring

The *Journal of Environmental Monitoring* has released a special issue highlighting selected presentations from the *Second Symposium on Beryllium Particulates and their Detection*, held November 2005 in Salt Lake City, UT. Featured in the issue, dated June 12, 2006, is an editorial by Martin Harper, NIOSH Health Effects Laboratory Division, on workplace aerosol sampling procedures and their relevance to the assessment of beryllium exposures. Scientific articles by NIOSH researchers Kevin Ashley, Paul Schlecht and Aleks Stefaniak include laboratory and field analyses of trace level beryllium, vacuum sampling techniques for industrial hygienists, and validating a portable method for determining trace levels of beryllium. A link to the special issue, with abstracts, is available at the Journal's web site, http://www.rsc.org/Publishing/Journals/em/Beryllium_SI.asp.

New Health Hazard Evaluation Reports Now Available

Three new health hazard evaluation reports are available from NIOSH:

- *Evaluation of exposure to welding fumes.* NIOSH investigators responded to an employee request to assess whether smoke from plasma cutting and welding was associated with employee complaints of sore throat, runny nose, eye irritation, coughing, migraines, and vomiting. The findings suggested that exposures to metal fumes, carbon monoxide, and ozone did not exceed applicable occupational exposure limits. To address irritant symptoms, however, the NIOSH investigators made recommendations to improve general ventilation and hazard communication training. The full report is available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2003-0237-2986.pdf>.
- *Evaluation of ergonomic factors at a building products distribution facility.* NIOSH investigators responded to a management request to address concerns about ergonomic aspects associated with the lifting of materials when filling customer orders. The evaluation indicated that workers generally used good practices, such as positioning themselves to avoid reaching across pallets while lifting,

and adjusting the height of storage and delivery pallets. However, the evaluation found a risk of musculoskeletal injuries when factors such as the weight of objects being lifted were assessed through the Revised NIOSH Lifting Equation and other criteria. Recommendations, including using lifting devices and reducing the weights of bundled building materials, were made to reduce the risk of injury. The full report is available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2005-0318-3006.pdf>.

- *Evaluation of mold exposure at a marine terminal.* NIOSH investigators responded to requests from managers of a cruise line and U.S. Customs and Border Protection, operating at a marine terminal. The requests concerned possible health problems related to mold exposure. Employees in the marine terminal had higher rates of respiratory complaints than employees from a nearby, non-contaminated facility. The NIOSH investigators made numerous recommendations, including recommendations to install vapor barriers between interior and exterior walls, seal holds in the building envelope, evaluate engineering options to stop water from entering the building, improve ventilation, conduct routine maintenance, and seek evaluation and care from an experienced occupational medicine physician. The full report is available at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2005-0138-3004.pdf>.

NIOSH Chief Scientist Begins Term as Interim CDC Associate Director for Science

James Stephens, Ph. D., the NIOSH Associate Director for Science, became the Acting Associate Director for Science for the U.S. Centers for Disease Control and Prevention on July 3. Dr. Stephens began his NIOSH career in 1992 as a research chemist at the Morgantown, WV, facility. In 1999, he became a senior scientist in the NIOSH Office of the Director and was appointed as the NIOSH Associate Director for Science in 2004. Anita Schill, Ph.D., NIOSH's Deputy Associate Director for Science, will serve as the interim NIOSH Associate Director for Science.

Look for Us

New York State Fair, August 24 – September 4, 2006, Syracuse, NY.

Be sure to stop by Booth #52 at the Verizon Center of Progress to visit an exhibit by NIOSH's National Personal Protective Technology Laboratory (NPPTL) and the American Industrial Hygiene Association. Attendees can see demonstrations on detecting workplace hazards and making safety and health recommendations to prevent workplace illness and injury. Stations will feature displays on physical, biological and chemical hazards, industrial hygiene education and career information, and resources for preventing workplace illness and injury.

8th Annual Technologies for Critical Incident Preparedness Conference and Exposition 2006, September 6 – 8, 2006, Atlanta, GA.

Look for NIOSH National Personal Protective Technology Laboratory staff at Booth #614 at this upcoming conference presented by the U.S. Department of Justice's National Institute of Justice, in association with CTC Inc.-Public Safety Technology Center (CTC). Bill Haskell, program manager for NPPTL research on personal protective equipment ensembles, will present "Update on NIOSH [CBRN Respiratory Protective Equipment](#) Standards and Project HEROES CBRN Structural Fire Fighting Ensemble Program."

r2p Corner

NIOSH and DuPont advance nanotechnology safety and health.

NIOSH and E.I. du Pont de Nemours & Co. will collaborate on work to evaluate current product performance, test methods, and research gaps related to personal protective equipment used to reduce occupational exposures to nanoparticles. The agreement came in a memorandum of understanding signed in June. The agreement is part of NIOSH's larger strategic program to advance research on the occupational safety and health applications and implications of nanotechnology in the workplace. This agreement is effective through December 2007.



NORA

NORA public comments are now available online.

Public comments describing National Occupational Research Agenda (NORA) research needs are now available online. They can be searched and printed at the NORA Web site, <http://www.cdc.gov/niosh/nora>. Beginning in May 2005, NIOSH posed the question, "What do you think are the greatest needs for workplace safety and health?" The comments currently available were received from over 700 people who responded through the NORA Web site and at the NORA town hall meetings. Their comments describe which diseases, injuries, exposures and populations require new research and interventions. Comments ranged from individuals to organizations, including this comment from a 15-year old student worker:



Teens are...injured at a [rate] twice the rate of adults...research should be geared towards teens...We teens have fun and vibrant ways of spreading information and can recruit others to join us in our fight... Hopefully, everyone in this room is listening, because I'm really speaking through my heart. If you're down with me, then you're trying to help the teens. (Full comment is available at <http://www2a.cdc.gov/niosh-comments/nora-comments/detailedcmnts.asp?id=1185&stmt=%28CONTAINS%28%2A%2C+%27+%22MassCOSH%22+%27%29+and+CONTAINS%28%2A%2C+%27+%22Raquel%22+%27%29%29&page=gnl.>)

Comments also spanned cross-sector needs to sector-specific suggestions, such as this comment about the health care and social assistance sector grouping:

We need a good series of studies of the impact of irregular hours of work on the health of employees in this industry. This would include shift work, but should not be restricted to "regular" shifts. One of the areas worth exploring is the impact of irregular hours on diet and obesity of workers. (Full comment is available at <http://www2a.cdc.gov/niosh-comments/nora-comments/detailedcmnts.asp?id=263&stmt=%28CONTAINS%28%2A%2C+%27+%22irregular%22+%27%29+and+CONTAINS%28%2A%2C+%27+%22obesity%22+%27%29%29&page=gnl.>)

You can search all of the comments by visiting the NORA Web site, <http://www.cdc.gov/niosh/nora>.

News From Our Partners

MSHA releases biannual newsletter

The Mine Safety and Health Administration (MSHA) released the July issue of its *Approval and Certification Center Customer Service Newsletter*. The newsletter provides information to equipment manufacturers and others involved in the mining community. <http://www.msha.gov/techsupp/acc/newsletters/newsletters.asp>.

Communication Products

Four new mining-related publications are now available.

Information Circular 9486. Handbook for Methane Control in Mining, DHHS (NIOSH) Publication Number 2006-127, can be accessed at <http://www.cdc.gov/niosh/mining/pubs/pubreference/2006-127.htm>.



Technology News. EZ-Up Curtain Stoppings: A Practical Solution for Directing Ventilation Airflows in Large-opening Metal/Nonmetal Mines, DHHS (NIOSH) Publication Number 2006-137, can be accessed at <http://www.cdc.gov/niosh/mining/pubs/pubreference/2006-137.htm>.



Technology News. Super Stopping: A Permanent Solid Stopping for Directing Ventilation Airflows in Large-opening Metal/Nonmetal Mines, DHHS (NIOSH) Publication Number 2006-134, can be accessed at <http://www.cdc.gov/niosh/mining/pubs/pubreference/2006-134.htm>.



Report of Investigations 9667. Effectiveness of Selected Diesel Particulate Matter Control Technologies for Underground Mining Applications: Isolated Zone Study, 2003, DHHS (NIOSH) Publication Number 2006-126, can be accessed at <http://www.cdc.gov/niosh/mining/pubs/pubreference/2006-126.htm>.



Proceedings from two NIOSH-sponsored conferences are now available.

Proceedings, Second International Fishing Industry Safety and Health Conference, DHHS (NIOSH) Publication Number 2006-114 can be accessed at <http://www.cdc.gov/niosh/docs/2006-114>.



Proceedings of a Meeting to Explore the Use of Ergonomics Interventions for the Mechanical and Electrical Trades, DHHS (NIOSH) Publication Number 2006-119, can be accessed at <http://www.cdc.gov/niosh/docs/2006-119/>.



Upcoming Events

Barriers to Effective Use of Hearing Protectors

NIOSH and the National Hearing Conservation Association will cosponsor the *Fourth Best Practices Conference* August 10–11, 2006, at the Cincinnati Marriott at River Center in Covington, KY. The conference will focus on real and perceived barriers to effective hearing protector use, highlight practical examples of solutions to overcoming these barriers, and provide direction for future research. Hearing protector use in special populations and hearing protector use at the limits of effectiveness are of special interest. Additional information about the conference can be found at <http://www.hearingconservation.org>.

13th International Respiratory Protection of Healthcare Workers and Emergency Responders

The *13th International Respiratory Protection of Healthcare Workers and Emergency Responders Conference* will be held August 27–September 1, 2006 in Toronto, Ontario, Canada. Topics for papers include respiratory protection for healthcare workers, emergency responders, and those in developing countries, updates on standards and regulations, emerging hazards and technologies, and fundamentals of respiratory protection. More information on the conference can be found at <http://www.isrp.com.au/>.

Contact Dermatitis 2006 – Blending Science with Best Practice

A combined meeting of the Experimental Contact Dermatitis Research Group and the American Contact Dermatitis Society will be held September 28–30, 2006, in Baltimore, MD. The meeting will focus on both the basic and applied science, and the clinical science of contact dermatitis. More information is available at <http://www.cdc.gov/niosh/topics/skin/cd2006>.

Noise-Induced Hearing Loss in Children at Work and Play

NIOSH and partners will cosponsor *Noise-Induced Hearing Loss (NIHL) in Children at Work and Play* October 19–20, 2006 in Cincinnati, Ohio. The conference will focus on the issue of NIHL in children who sometimes begin working as early as age 10–12 years, often in noisy occupational environments, such as construction, agriculture, entertainment and landscaping. Other cosponsors for the conference include the National Hearing Conservation Association, Oregon Health and Science University, the Marion Downs Hearing Center, the University of Northern Colorado, and the National Institute on Deafness and Other Communication Disorders. More information on the conference is available at http://www.hearingconservation.org/conf_childrenconf.html.

International Conference on Nanotechnology Occupational and Environmental Health and Safety: Research to Practice

NIOSH and the University of Cincinnati will cosponsor the *International Conference on Nanotechnology Occupational and Environmental Health and Safety: Research to Practice* December 3–8, 2006 in Cincinnati, Ohio. The conference is centered on the impact of nanotechnology on occupational and environmental health and safety. For more information, visit the conference Web site at <http://www.uc.edu/noehs>. The conference follows other successful international forums cosponsored by NIOSH in Buxton, U. K., in 2004, Minneapolis in 2006, and Miami earlier in 2006.

Word of the Month

CBRN Respiratory Protective Equipment refers to respiratory protective devices used to prevent potential exposures of emergency responders by inhalation to airborne chemical, biological, radiological, and nuclear (CBRN) contaminants..

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